

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Reassessment of Federal Communications)	ET Docket No. 13-84
Commission Radiofrequency Exposure Limits and)	
Policies)	
)	
Proposed Changes in the Commission's Rules)	ET Docket No. 03-137
Regarding Human Exposure to Radiofrequency)	
Electromagnetic Fields)	
)	

REPLY COMMENTS OF THE UTILITIES TELECOM COUNCIL

Pursuant to Section 1.415 of the Commission's Rules, the Utilities Telecom Council hereby files its reply comments to comments submitted in response to the FCC's Further Notice of Proposed Rulemaking (FNPRM) in the above-referenced proceeding.¹ UTC opposes the Commission's proposal to eliminate service-specific categorical exclusions for transmitting facilities that generally pose little or no risk of causing exposures in excess of the FCC's radio frequency (RF) exposure limits. Requiring routine environmental evaluation of these operations would be overly burdensome and is not necessary to protect against RF exposure. In addition, UTC requests clarification that that certain low power fixed transmitters that utilities use to ensure the safe, reliable and efficient delivery of essential electric, gas and water services are specifically categorically excluded from routine evaluation. UTC also requests that the Commission clarify the mitigation requirements with regard to training and notification and provide flexibility with regard to compliance, consistent with its *Report and Order*. Finally, the Commission should clarify the responsibilities of entities at multiple transmitter sites, so that new entrants that install transmitters comply with the overall RF exposure limits and are responsible for mitigation.

¹ Reassessment of Federal Communications Commission Radiofrequency Exposure Limits and Policies Proposed Changes in the Commission's Rules Regarding Human Exposure to Radiofrequency Electromagnetic Fields, *First Report and Order Further Notice of Proposed Rule Making and Notice of Inquiry*, ET Docket No. 13-84, 28 FCC Rcd. 3498 (2013).

I. Background and Introduction

For purposes of determining whether licensees or applicants must conduct routine environmental evaluation to demonstrate compliance with the Commission's RF exposure limits, the Commission proposes to adopt a sliding scale based on power, separation distance (not counting antenna height) and frequency. This sliding scale would apply uniformly across all services (rather than just the services in Table 1 of section 1.1307(b) of the FCC's rules, currently). The Commission asserts that this sliding scale will be simple and that it is appropriate, given the increased opportunistic use of frequencies and the need to regulate like services similarly.²

Currently, the Commission's environmental rules identify particular categories of existing or proposed transmitting facilities for which licensees and applicants are required to conduct routine environmental evaluation to determine whether these facilities comply with the FCC's RF exposure limits. All other transmitting facilities are "categorically excluded" from requirements for conducting such routine evaluations because the Commission has found that they offer negligible potential for causing exposures in excess of its RF exposure limits based on factors such as operating power and human accessibility.³ In that regard, the Commission's exposure limits specify maximum permissible exposure (MPE) limits for general population and occupational, based upon factors for accessibility, such

² *Report and Order and Further NPRM* at ¶4 (stating that "[t]hese proposed exemptions involve simple calculations to establish whether any further determination of compliance is necessary. Currently, routine evaluations are required for specific rule subparts meeting certain criteria (see Table 1 in section 1.1307(b)(1) and text in (b)(2)). The new, general exemptions would instead apply to all subparts authorizing RF sources, including some that are not presently listed. Given the trend toward opportunistic spectrum access to allow services to utilize multiple bands of frequencies with various power limits, inclusion of all services is necessary to better ensure compliance with our exposure limits.") *And see Id.* at ¶119 (stating that "[w]e propose that these criteria apply to all of our rules authorizing RF sources – in short, to treat like sources similarly. These proposed criteria based on physical properties are more appropriate than the existing distinctions between service classifications, allow greater simplicity, are technologically neutral, and do not have to be modified to accommodate new or converging services.")

³ Proposed Changes in the Commission's Rules Regarding Human Exposure to Radiofrequency Electromagnetic Fields, *Notice of Proposed Rule Making*, ET Docket No. 03-137, 18 FCC Rcd. 13187, 13190 at ¶6 (2003)(hereinafter "*2003 NPRM*"). *See* Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation, *Report and Order*, ET Docket No. 93-62, 11 FCC Rcd. 15123, ¶¶75-93 (1996)(addressing modification of the categorical exclusions). *See also* Procedures for Reviewing Requests for Relief From State and Local Regulations Pursuant to Section 332(C)(7)(B)(V) of the Communications Act of 1934, *Second Memorandum Opinion and Order and Notice of Proposed Rulemaking*, WT Docket No. 97-192, 12 FCC Rcd. 13494 (1997).

as the height above ground of an antenna or whether an antenna is mounted on a tower or on a rooftop.

UTC's members include utilities and other critical infrastructure industries (CII). These members operate extensive communications networks that include wireless communications services, which are currently categorically excluded from routine environmental evaluation under the Commission's rules under Section 1.1307(b). Some examples include Part 90 private land mobile radio systems and Part 101 private operational fixed systems, as well as Part 15 unlicensed operations. These systems are used to support the safe, reliable and efficient delivery of essential electric, gas and water services to the public at large. They include fixed, mobile and portable transmitters, and are widely used throughout their service territories. Moreover, these transmitters are being deployed deeper into their communications networks in order to support smart grid and other advanced delivery systems. Thus, UTC and its members would be directly and significantly impacted if the Commission adopted the proposed rule changes to eliminate the categorical exclusions that currently apply to their communications networks.

II. The Commission Should Not Eliminate the Service Specific Categorical Exclusions, Particularly for Part 90 Private Land Mobile and Part 101 Microwave Services.

Given that the Commission has previously determined that Part 90 land mobile and Part 101 microwave facilities generally do not pose a significant risk of exceeding the Commission's RF exposure limits, and that there is no indication that these facilities have actually resulted in RF exposures in excess of the limits, the Commission should not eliminate the categorical exclusions that apply to them at this time. Requiring routine evaluations for these operations is not necessary to protect against excessive RF exposure, because nothing has changed that would alter the Commission's earlier conclusion that these systems pose a minimal risk.

To the contrary, requiring them to conduct routine environmental evaluations would impose significant costs and delays on applicants and licensees for these services. While the Commission proposes to limit the application of this rule change prospectively so that routine evaluations would not be required for existing facilities,⁴ if existing facilities are modified these facilities would be required to

⁴ *Report and Order and Further Notice of Proposed Rule Making* at ¶103.

conduct routine environmental evaluations, as proposed by the Commission. As utilities and other CII often do modify their existing facilities as a practical matter, it is likely that many of their existing facilities that are modified would be subject to routine evaluation going forward, even though the FCC would continue to exclude existing Part 90 and Part 101 facilities generally.

A. Eliminating service-specific categorical exclusions is not necessary to protect against RF exposure.

The Commission has proposed to eliminate service-specific categorical exclusions, and would require all applicants and licensees using transmitters with an output power greater than 1 mW to conduct routine evaluations to demonstrate compliance with the Commission's RF exposure limits.⁵ In support of its proposal, the Commission asserts that eliminating service-specific categorical exclusions is necessary to better ensure compliance with the exposure limits given the trend toward opportunistic spectrum access to allow services to utilize multiple bands of frequencies with various power limits.⁶

UTC respectfully disagrees with the Commission and agrees with numerous parties on the record that it is not necessary to eliminate service-specific categorical exclusions. Contrary to the FCC's assertion that the trend towards opportunistic use of existing bands dictates the use of uniform exclusion criteria across the bands, UTC believes that it is just as effective – and simpler in practice – to conduct different assessments tailored to different types of devices operating in each band. That way, existing services in a band could remain categorically excluded, while devices that make opportunistic uses of the band at higher power could be subject to routine evaluation, as necessary.⁷ Also contrary to the FCC's assertion that uniform rules would eliminate the need to establish exclusion criteria for new or converging services, UTC believes that it makes far more sense to develop exclusion criteria for the new services rather than to require licensees of existing facilities to go back and conduct routine evaluations of every

⁵ *Report and Order and Further NPRM* at ¶¶121-126.

⁶ *Report and Order and Further NPRM* at ¶4.

⁷ See Comments of the Fixed Wireless Communications Coalition at 3 (filed Sept. 3, 2013)(stating that “multiple individual assessments, under separate rules tailored to each type of device, will be simpler in practice than the more involved uniform calculation applied to each of those same devices.”)

transmitter whenever those facilities are modified, even though those same facilities were previously categorically excluded because they posed a minimal risk of exceeding the RF exposure limits.⁸

The proposed approach also ignores other important factors that informed the Commission's existing service specific categorical exclusions – namely accessibility and height of the antenna above the ground. The Commission accounted for these factors because they directly corresponded with the duration and intensity of the RF exposure that was likely to occur under the circumstances. The more accessible the antenna, the more likely the duration of exposure would be greater. The higher the antenna above the ground, the more likely the intensity of the exposure would decrease. Of course, accessibility and antenna height are interrelated, which is also why the Commission considered them, as well. Thus, the Commission was justifiably concerned in its *2003 NPRM* that rooftop facilities should be subject to routine evaluation, because they were more accessible by individuals.⁹ Conversely, accessibility and the potential for RF exposure is lower for transmitters that are mounted on dedicated wireless support structures, such as towers, monopoles, water tanks, and utility infrastructure (where access can be controlled through positive access control and other mitigation techniques beyond what is available on rooftops and other collocated facilities).¹⁰ That is another reason why Part 90 land mobile and Part 101 microwave facilities should be categorically excluded, because their transmitters are typically mounted on dedicated wireless support structures far removed from accessible areas and high above the ground. Therefore, the Commission's proposal fails to consider important factors such as accessibility and height above the ground, which would further justify the categorical exclusion of certain services, such as Part 90 land mobile and Part 101 microwave services, from routine environmental evaluation.

⁸ See Comments of the Fixed Wireless Communications Coalition at 3 (filed Sept. 3, 2013)(stating “[o]n balance, though, it seems more efficient for the Commission to set one-time exclusion criteria in the course of authorizing a new service than for myriad licensees in the field to struggle with the harmonized calculations for every new installation.”)

⁹ See *2003 NPRM*, 18 FCC Rcd. at 13190, ¶¶ 6-7.

¹⁰ See Comments of PCIA – the Wireless Infrastructure Association and the HetNet Forum at 5 (filed Sept. 3, 2013).

B. The proposed rule change would impose significant costs and is complex.

The FCC's proposal to eliminate service-specific categorical exclusions would also impose significant and unnecessary compliance costs upon licensees. Applicants and licensees would be required to make complex RF engineering calculations and would need to physically review each new transmitter in order to verify that there was adequate separation distance between the proposed antenna location and any area that could be accessible to any worker or member of the general public.¹¹ The complexity of these calculations and inspections would be compounded by the Commission's proposal to require applicants and licensees to determine the overall power of sites where there are multiple transmitters.¹² When considered in the context of the numerous facilities that could be subject to routine evaluation under the Commission's proposed rule, the cost of compliance could become staggering for some licensees.¹³ Therefore, the Commission should carefully consider these costs when extending routine evaluations to services that are currently categorically excluded and which pose minimal risk of exceeding RF exposure limits.

III. The Commission Should Provide Clarification Regarding Categorical Exclusions, Mitigation and Compliance at Multiple Transmitter Sites.

UTC requests that the Commission provide clarification on several issues related to categorical exclusions and mitigation requirements related to the proposals in its NPRM.¹⁴ In addition, UTC requests that the Commission clarify certain issues regarding demonstrating compliance at sites with multiple transmitters.

¹¹ See Comments of Blooston, Mordkofsky, Dickens, Duffy & Prendergast, LLP at 2 (filed Sept. 3, 2013).

¹² See Comments of the Fixed Wireless Communications Coalition at 2-3 (filed Sept. 3, 2013) (stating that "[i]f the facility includes multiple transmitters, [compliance measurements] can become exceedingly complex.")

¹³ See e.g. Comments of Southern Communications Services, Inc. and Southern Company Services, Inc. in ET Docket No. 03-137 at 6, 9 (filed Dec. 8, 2003)(reporting that at the time Southern had 6,500 MAS remote sites and that it anticipated adding even more over time, which represented an "enormous undertaking" if Southern was required to undertake a system-wide review of these sites throughout its multi-state operating area, if the Commission required them to be routinely evaluated.)

¹⁴ See *Report and Order and Further NPRM* at ¶¶114-141 (regarding categorical exclusions and streamlined process) and ¶¶175-201 (regarding mitigation requirements).

Specifically with regard to categorical exclusion, the Commission should clarify that low power fixed transmitters -- such as those that utilities and other CII use for advanced metering infrastructure (AMI), multiple address systems (MAS) and supervisory control and data acquisition (SCADA) -- are categorically excluded from routine evaluation. These devices operate at low power and typically only transmit when they are polled by the associated master station or network node. As such, they pose little or no risk of exceeding the RF exposure limits, especially when a time average measurements are conducted. Similarly, bidirectional amplifiers that are used to extend coverage within a building should also be categorically excluded, due to their low power and minimal risk of causing excessive RF exposure.¹⁵ Alternatively, the power limits proposed for categorical exclusion in Section 1.1307(b)(1)(ii) should be revised upward to clearly encompass bi-directional amplifiers. Finally, and consistent with the Commission's Report and Order, any new rules should not require licensees to conduct routine evaluations for devices that were licensed before the rules go into effect.¹⁶

Specifically with regard to mitigation, UTC supports the Commission's proposal that training may be oral *or* written, but need not be oral *and* written.¹⁷ Moreover, UTC supports the Commission's decision to provide flexibility with respect to training and notification for employees and transients regarding compliance with the RF exposure limits.¹⁸ As the Commission recognized in the Further NPRM, this is consistent with the fundamental purpose of the FCC's rules regarding occupational/controlled exposure to require that workers at the higher permitted levels of exposure have

¹⁵ Bi-directional amplifiers are limited by Section 90.219 to 5 watts ERP.

¹⁶ *Report and Order and Further NPRM* at ¶103 (stating "We will not require a new evaluation of all existing sites that were excluded from evaluation under previous criteria.")

¹⁷ *Id.* at ¶75 (stating that "we are specifying that for individuals exposed as a consequence of their employment, using the occupational/controlled limits, written and/or verbal (orally-communicated) information must be provided, at the discretion of the responsible party as is necessary to ensure compliance with the occupational/controlled limits")

¹⁸ *Id.* (stating that "with the exception of transient individuals, appropriate training regarding work practices that will ensure that exposed persons are 'fully aware of the potential for exposure and can exercise control over their exposure' is required to be provided.)

the appropriate level of awareness and control to ensure that they are not exposed above the occupational/controlled limits.¹⁹ This is also consistent with numerous comments filed in response to the 2003 Notice²⁰ and in response to the *Further NPRM*.²¹

In addition, UTC requests that signage requirements should not be overly burdensome so as to reduce the effectiveness of providing warnings to the public and workers regarding potential RF exposure. In that regard, UTC agrees with comments on the record that would limit the Commission's proposal that licensees place signage at the point where each tier is exceeded (i.e., one at general, another at occupational, etc.), so that over-signage does not result "in undue alarm, confusion, and subsequent disregard of meaningful postings."²² Finally, the Commission should clarify that there will be a reasonable transition period for the implementation of these mitigation requirements.²³

Specifically with regard to multiple transmitter sites, UTC disagrees with the Commission's clarification regarding the apportionment of liability for tenants responsible for more than 5% of RF emissions at site, and similarly it suggests that responsibility for mitigation should be the responsibility of the entity that caused the overall RF emissions to exceed the RF exposure

¹⁹ *Id.*

²⁰ See e.g. Comments of Southern Communications Services, Inc. and Southern Company Services, Inc. in ET Docket No. 03-137 at 9 (filed Dec. 8, 2003).

²¹ See e.g. Comments of PCIA – the Wireless Infrastructure Association and the HetNet Forum at 5, citing *Further NPRM* at ¶186 (filed Sept. 3, 2013)(stating "[f]lexibility should be the cornerstone of any new mitigation regulations as '[r]adio transmitters and their antennas have been deployed in a wide variety of forms' and 'each transmitter site is different.'")

²² Report and Order and *Further NPRM* at ¶194 (stating that [w]e have observed postings that imply that occupational limits are exceeded far outside areas that approach the general population limit...[and that] [s]uch 'over-signage' may result in undue alarm, confusion, and subsequent disregard of meaningful postings.")

²³ See Comments of PCIA – the Wireless Infrastructure Association and the HetNet Forum at 9(filed Sept. 3, 2013)(recommending a two year transition period, based on the substantial changes in signs, barriers, and training that are proposed.) See also Comments of Southern Communications Services, Inc. and Southern Company Services, Inc. in ET Docket No. 03-137 at 9 (filed Dec. 8, 2003). (recommending that any rule changes only apply to new facilities and not existing facilities and recommending a significantly longer transition period than six months if the proposed rule changes were applied to existing facilities.)

limits.²⁴ The Commission should clarify that the last tenant to occupy a transmitter site should be primarily responsible to ensure RF emission levels are not exceeded, as well as to mitigate the extent to which its emissions exceed the RF exposure limits.²⁵ This approach is consistent with the Commission's approach in other contexts.²⁶ Finally, the Commission should clarify that will not require re-evaluation of existing sites that were compliant before any new rules were adopted. This would be consistent with the Commission's decision not to apply its new RF compliance requirements to existing facilities.²⁷

IV. Conclusion

UTC requests that the Commission not eliminate the current service-specific categorical exclusions, particularly with regard to Part 90 land mobile and Part 101 microwave facilities, as well as other low power transmitters that do not pose a significant risk of exceeding the RF exposure limits. This proposal is not necessary to protect against excessive RF exposure and it would impose significant cost and delays associated with complying routine evaluations, even on a going forward basis. In addition, the Commission should clarify that that low power fixed transmitters -- such as those that utilities and other CII use for advanced metering infrastructure

²⁴ *But see, Report and Order and Further NPRM* at ¶80 (stating that “[c]omments received [in response to the 2003 Notice] suggested that it is necessary for an individual licensee to be assigned primary responsibility for compliance at a multiple use site. However, we clarify that this is not the case and emphasize cooperation and that failure to comply at multiple use sites can result in penalties for all site occupants that contribute significantly to exposure, not just the newest occupant or the occupant which contributes the most to exposure.”) While UTC agrees that existing licensees would have a responsibility to cooperate with the newcomer in resolving RF issues, the existing licensees should have only secondary responsibility to ensure compliance when new transmitters are added to the environment.

²⁵ UTC suggests that site lessors and managers provide a mechanism by which lessees may be able to exchange relevant information regarding site compliance. That would assist the newcomer to determine if they would cause the site to exceed the RF exposure limits.

²⁶ For example, in the context of pole attachments, the Commission assigns responsibility for maintaining code compliance of the pole to the party whose attachment would bring the pole out of compliance. Except where an existing attaching entity brings its own attachments into code compliance as part of the modification of the pole, the FCC does not require other parties to share in the cost of accommodating the new attachment by the third party.

²⁷ *Report and Order and Further Notice of Proposed Rule Making* at ¶103.

(AMI), multiple address systems (MAS) and supervisory control and data acquisition (SCADA) – are categorically excluded from routine evaluation. Similarly, it should clarify that bidirectional amplifiers used to improve signal coverage inside buildings should be categorically excluded, due to their low power and marginal risk of exceeding the RF exposure limits. Moreover, the Commission should clarify the mitigation requirements with regard to training and notification and provide flexibility with regard to compliance, consistent with its Report and Order. Finally, the Commission should clarify the responsibilities of entities at multiple transmitter sites, so that new transmitters comply with the overall RF exposure limits and are responsible for mitigation.

Respectfully submitted,

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